

## REMARKS

This is intended as a full and complete response to the Office Action dated September 17, 2003, having a shortened statutory period for response set to expire on December 17, 2003. Please reconsider the claims pending in the application for reasons discussed below.

Claims 21-32 remain pending in the application following the entry of this response. Claims 1-20 have been cancelled by Applicant. Claims 1-20 are rejected by the Examiner. Claims 21-32 are added. Consideration of the added claims is requested for reasons presented below.

The Examiner states that claims 1-20 of this application conflict with claims 1-20 of pending and co-assigned U.S. Patent Application Serial No. 10/052,049. The Examiner asserts that claims 1-20 are provisionally rejected under U.S.C. § 101 as claiming the same invention as '049. Applicant respectfully traverses the rejection.

Original claims 1-20 are cancelled and new claims 21-32 are added. The invention as claimed in the present application does not conflict with the claimed invention of U.S. Patent Application Serial No. 10/052,049.

Claims 1 and 8-11 were rejected under 35 U.S.C. § 102(e) in view of U.S. Patent No. 6,464,779 (*Powell*) on grounds that the claimed process was disclosed by *Powell*. Claims 1-6 and 12-17 were rejected under 35 U.S.C. § 102(e) in view of U.S. Patent Publication No. 20020018849 (*George*) on grounds that the claimed process was disclosed by *George*. Claims 1-6 were rejected under 35 U.S.C. § 102(e) in view of U.S. Patent No. 6,090,442 (*Klaus*) on grounds that the claimed process was disclosed by *Klaus*. Applicant respectfully traverses the rejection.

*Powell* discloses a method to deposit copper films by atomic layer chemical vapor deposition. *Powell* has a filing date of January 19, 2001. The present patent application claims benefit of the U.S. Provisional Patent Application Serial No. 60/261,946, filed January 16, 2001. Support for the pending claims is found throughout the provisional application. Therefore, *Powell* is not prior art to the present patent application under 35 U.S.C. § 102(e) as applied by the Examiner.

*George* discloses a chemical vapor deposition method to deposit silicon dioxide by flowing a catalyst, such as ammonia or a Lewis base, along with a silicon precursor and an oxygen source. *Klaus* discloses a binary reaction sequence chemistry to deposit silicon dioxide films by flowing a catalyst, such as pyridine, during both half-reactions of the silicon precursor and the oxygen precursor. *George* and *Klaus* do not teach, show or suggest a method for depositing a metal-containing film to a substrate within a process chamber by an atomic layer deposition technique, comprising introducing a metal-containing precursor to the process chamber, absorbing the metal-containing precursor to the substrate, purging the process chamber with a purge gas, introducing a process gas comprising a gaseous catalyst, reacting the absorbed metal-containing precursor with the process gas to deposit the metal-containing film and purging the process chamber with the purge gas, as recited in claim 21, and claims dependent thereon. Also, *George* and *Klaus* do not teach, show or suggest a method for depositing a copper-containing film to a substrate within a process chamber by an atomic layer deposition technique, comprising introducing a copper precursor to the process chamber, absorbing the copper precursor to the substrate, purging the process chamber with a purge gas, introducing a process gas comprising a gaseous catalyst, chemically reducing the absorbed copper precursor with the process gas to deposit the copper-containing film and purging the process chamber with the purge gas, as recited in claim 27, and claims dependent thereon. Also, *George* and *Klaus* do not teach, show or suggest a method for depositing a copper-containing film to a substrate within a process chamber by an atomic layer deposition technique, comprising introducing a copper precursor to the process chamber, absorbing the copper precursor to the substrate, purging the process chamber with a purge gas, introducing a process gas comprising water, chemically reducing the absorbed precursor with the process gas to deposit the copper-containing film and purging the process chamber with the purge gas, as recited in claim 31, and claims dependent thereon. New claims 21-32 do not teach, show or suggest the subject matter of *George* and *Klaus* alone or in combination.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show or suggest the invention as claimed.

PATENT

Atty. Dkt. No. AMAT/5027.02/CPI/COPPER/PJS

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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William B. Patterson  
Registration No. 34,102  
MOSER, PATTERSON & SHERIDAN, L.L.P.  
3040 Post Oak Blvd. Suite 1500  
Houston, TX 77056  
Telephone: (713) 623-4844  
Facsimile: (713) 623-4846  
Attorney for Applicant(s)